MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 1, 2016/2017

MVR 2033 – SIMULATION TECHNOLOGY

(All sections / Groups)

13 OCTOBER 2016
2.30 p.m. - 4.30 p.m.
(2 Hours)

INSTRUCTIONS TO THE STUDENTS

1. This question paper consists of 3 pages including cover page

2. Answer only **FOUR (4)** out of 6 questions. Total marks is FORTY (40) marks. The distribution of the marks for each question is given accordingly at the end of each question.

3. Please write all your answers clearly in the answer booklet provided.

Answer any FOUR (4) questions ONLY. Total marks is 40

Question 1

Simulation elements are used to capture and model experiences.

a) What is immersive learning simulation? Briefly explain the different between educational simulation in a real world and in virtual world with an example.

[6 marks]

b) There are two types of serious games. Explain both types and give an example each.

[4 marks]

Question 2

a) There are seven (7) model of Sims for building out educational systems in Sims. List down any **four** of them.

[4 marks]

b) Why is the game element important in simulation? Briefly explain any **four** of the techniques to increase engagement in games.

[6 marks]

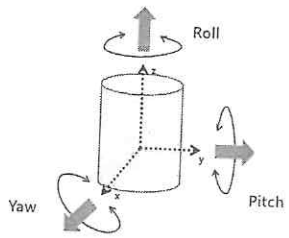
Question 3

a) What is 3D interaction?

[2 marks]

b) 3D input device is one of 3D UIs technical design. Explain why 3D input device is important for 3D UI?

[2 marks]



c) Degree of freedom (DOF) is one of 3D user input devices. Briefly explain about DOF, the coordinate system and how they work?

[6 marks]

Continued...

Question 4

a) What is the 'display field of view' (FOV)?

[2 Marks]

b) Briefly explain the four types of multiplexing

[8 marks]

Question 5

a) List down 2 types of Level of detail (LOD) management.

[2 marks]

b) In the behaviour autonomy, what is the difference between guided autonomy and autonomous behaviour?

[4 marks]

c) Explain how does the automatic cell segmentation work?

[4 marks]

Question 6

a) Discuss how direct effect occurs on the visual systems?

[2 marks]

b) Briefly explain about the neural conflict and the relation with cybersickness?

[4 marks]

c) State any two reasons that can influence cybersickness

[4 marks]

End of Paper